

Title (en)  
ELECTRON BEAM EXCITED PHOSPHOR OR PHOSPHOR FILM AND COLOR DISPLAY UNIT UTILIZING THE SAME

Title (de)  
ELEKTRONSTRAHLANGEREGETER PHOSPHOR ODER PHOSPHORFILM UND DARAUF BASIERENDE FARBDISPLAYEINHEIT

Title (fr)  
PHOSPHORE EXCITÉ PAR FAISCEAU ÉLECTRONIQUE OU FILM DE PHOSPHORE ET UNITÉ D'AFFICHAGE COULEUR UTILISANT LEDIT PHOSPHORE

Publication  
**EP 1790709 A4 20090722 (EN)**

Application  
**EP 05767083 A 20050728**

Priority  

- JP 2005013838 W 20050728
- JP 2004225688 A 20040802
- JP 2005075840 A 20050316

Abstract (en)  
[origin: US2007029525A1] To provide a phosphor for an electron beam excitation with a small deterioration in an emission efficiency and capable of maintaining a high luminance, even when an excitation density of an electron beam for a phosphor excitation is increased. As raw materials, Ca<SUB>3</SUB>N<SUB>2</SUB>(2N), AlN(3N), Si<SUB>3</SUB>N<SUB>4</SUB>(3N), and Eu<SUB>2</SUB>O<SUB>3</SUB>(3N) are prepared, and the raw materials thus prepared are measured and mixed, so that a molar ratio of each element becomes (Ca+Eu):Al:Si=1:1:1. Then, the mixture thus obtained is maintained and fired for at 1500° C. for 3 hours, and thereafter crushed, to manufacture the phosphor having a composition formula Ca<SUB>0.985</SUB>SiAlN<SUB>3</SUB>:Eu<SUB>0.015</SUB>.

IPC 8 full level  
**C09K 11/64** (2006.01); **C09K 11/66** (2006.01); **H01J 29/20** (2006.01)

CPC (source: EP KR US)  
**C04B 35/581** (2013.01 - EP US); **C04B 35/584** (2013.01 - EP US); **C04B 35/6262** (2013.01 - EP US); **C09K 11/08** (2013.01 - KR); **C09K 11/0883** (2013.01 - EP US); **C09K 11/64** (2013.01 - KR); **C09K 11/66** (2013.01 - KR); **C09K 11/77348** (2021.01 - EP KR US); **H01J 1/62** (2013.01 - KR); **H01J 29/20** (2013.01 - EP US); **C04B 2235/3224** (2013.01 - EP US); **C04B 2235/3852** (2013.01 - EP US); **C04B 2235/3865** (2013.01 - EP US); **C04B 2235/3873** (2013.01 - EP US); **C04B 2235/5436** (2013.01 - EP US); **H01J 2329/00** (2013.01 - EP US)

Citation (search report)  

- [E] EP 1696016 A1 20060830 - INDP ADMINISTRATIVE INST NIMS [JP], et al
- [A] EP 1264873 A2 20021211 - NAT INST FOR MATERIALS SCIENCE [JP]
- [A] JP 2000073053 A 20000307 - HITACHI LTD
- [A] JP 2003013059 A 20030115 - HITACHI LTD
- See references of WO 2006013777A1

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EP2527418A4; US7994700B2; US9738829B2; US10072207B2; US11084980B2; US11697765B2

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**US 19459005 A 20050802**; EP 05767083 A 20050728; JP 2005013838 W 20050728; JP 2005075840 A 20050316; KR 20077004911 A 20070228; TW 94126174 A 20050802; US 201113100751 A 20110504